

ANTI-SLIP DEVICE FOR FITNESS EXPANDER

BACKGROUND OF THE INVENTION

5 1. Field of the Invention

The present invention relates to a fitness expander, especially one having a plurality of hollow hose with anti-slip device therein arranged between two handles. The anti-slip device is composed of a soft and hollow cone with a plurality of elastic rings so as to make the anti-slip device contact the hollow hose in a certain area while being
10 expanded for preventing the hollow hose from abrasion and slipping away.

2. Description of the Prior Art

Conventional fitness equipment for training chest muscle includes man-sized equipment with adjustable load or undersized equipment such as fitness expander with
15 springs. For home fitness, people tend to use the fitness expander having a plurality of springs arranged between two handles. By pulling two ends of the fitness expander, the finest pectoral workout is available.

However, the conventional fitness expander occupies quite large space because the
20 springs are not foldable. It's also quite heavy. Moreover, the sweat with salt produced

during exercise is easy to make the surface of the springs rusty. The inner surface of the spring is also difficult to maintain thus cause inconvenience.

Refer to Fig.8, the spring is replaced by a hollow hose. The device includes two
5 handles (a), each having at least two holes (a1), a metal fastening ring (b) is
positioned on the hole (a1). A hollow hose (c) is inserted through and connected
between the two metal fastening rings (b) on the handles (a) respectively, and an
anti-slip ball (d) is positioned on each of two ends of the hollow hose (c) for fixing the
hollow hose (c) on the handles (a) by the anti-slip ball (d) leaning against the metal
10 fastening ring (b), as shown in Fig.9.

However, when the hollow hose (c) is pulled and extended, the diameter thereof is
contracted so that the anti-slip ball (d) make the stretching area on the outer surface of
the distal end of the hollow hose (c) contact the metal fastening ring (b) in circular
15 line, as shown in Fig.10. While when the hollow hose (c) is loosened, it turns back to
the original length. During the process of contraction and stretch, the extended area on
the outer surface of the distal end of the hollow hose (c), contact with the metal
fastening ring (b), is easy to be worn-out. When being abraded in a certain degree, the
hollow hose (c) breaks off. This causes users accidental harms.

Moreover, refer from Fig. 11 to Fig. 13, even a prior art having a cylindrical anti-slip device (f), a rivet-like anti-slip device (g) or I-shaped anti-slip device (h) instead of the anti-slip ball (d), the problem of worn-out of hollow hose (c) by the anti-slip devices still exists. There is still a need for improvement.

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SUMMARY OF THE INVENTION

It is therefore a primary object of the present invention to provide a fitness expander having a plurality of hollow hose with two anti-slip devices on two distal ends of the
10 hollow hose, disposed between the two handles. The anti-slip device is a soft and hollow cone with a plurality of and elastic rings thereon so that the contact of the anti-slip device with the hollow hose forms a plane while the hollow hose is stretched. Thus the abrasion of the hollow hose by the anti-slip device can be avoided.

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BRIEF DESCRIPTION OF THE DRAWINGS

The accomplishment of the above-mentioned object of the present invention will become apparent from the following description and its accompanying drawings which disclose illustrative an embodiment of the present invention, and are as follows:

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Fig.1 is a front view of the present invention;

Fig.2 is a perspective view of the present invention;

Fig.3 is a cross-sectional view of the present invention not being put on loading;

Fig.4 is a cross-sectional view of the present invention while being put on loading;

5 Fig.5 is another embodiment of a anti-slip device in accordance with the present invention;

Fig.6 is a cross-sectional view of another embodiment of the present invention not being put on loading;

10 Fig.7 is a cross-sectional view of another embodiment of the present invention while being put on loading;

Fig.8 is a front view of a prior art;

Fig.9 is a cross-sectional view of the prior art not being put on loading;

Fig.10 is a cross-sectional view of the prior art while being put on loading;

Fig.11 is a cross-sectional view of another prior art;

15 Fig.12 is a cross-sectional view of a further prior art;

Fig.13 is a cross-sectional view of a further prior art.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Refer to Fig.1, the present invention having two handles 1, each with at least two through holes 11, a metal fastening ring 2 clipped and positioned on the through hole 11, a hollow hose 3 inserted through the two corresponding metal fastening rings 2 on each of the handle 1, two anti-slip devices 4 mounted in the two distal ends of the hollow hose 3 for extending the hollow hose 3 and leaning on the metal fastening ring 2. This make the two ends of the hollow hose 3 being fixed firmly on the each of the handles 1 respectively. The present invention features on that the anti-slip device 4 is made of soft material and is a hollow cone 41 with a plurality of thin and elastic rings 42 disposed on the circumference thereof. Refer to Fig. 2 & Fig. 3, when the hollow hose is pulled, each of the thin and elastic rings 42 deforms and contacts the inner face of the hollow hose 3. The contact area between the hollow hose 3 and the metal fastening ring 2 is not a circular line but a plane, as shown in Fig. 4. Thus the hollow hose 3 will not be worn out by the metal fastening ring 2.

In accordance with the structure mentioned above, when the anti-slip device 4 is mounted inside the hollow hose 3, the two hands of users hold the two handles respectively without putting any loading on the present invention and the hollow hose 3 is not stretched, each of the thin and elastic rings 42 on the cone 41 of the anti-slip device 4 lean on the inner surface of the hollow hose 3 in parallel, as shown in Fig.3.

While the users' hands put loading on the present invention, the hollow hose 3 is

pulled and the diameter thereof is shortened so that the anti-slip device 4 slides into the metal fastening ring 2 and each of the thin and elastic rings 42 on the cone 41 thereof deforms and contact the inner surface of the hollow hose 3 in a plane. Refer to Fig.4, thus the contact of the hollow hose 3 with the metal fastening ring 2 also forms a plane. And the hollow hose 3 is fixed firmly on the metal fastening rings 2 of the handles 1 by the cone 41 of the anti-slip device 4. Therefore, when the hollow hose 3 is stretched or contracted by loading, the friction due to the siding between the hollow hose 3 and the metal fastening rings 2 can be reduced so as to avoid the worn-out and the breakage of the hollow hose 3.

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Refer to Fig.5, the anti-slip device 4a can be designed to have two small cones 41a, positioned opposite to each other. Thus the anti-slip device 4a can be mounted into the hollow hose 3 bi-directional for convenient assembling. The two ends of the hollow hose 3 is connected together to form a loop, as shown in Fig. 6 and Fig. 7. This is another embodiment of the present invention.

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It should be noted that the above description and accompanying drawings are only used to illustrate some embodiments of the present invention, not intended to limit the scope thereof. Any modification of the embodiments should fall within the scope of the present invention.

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